Chelmsford Amateur Radio Society

Established 1936

Affiliated to the RSGB *Club Call Sign: G0MWT*
President: Harry Heap G5HF *Chairman: John Bowen G8DET*
Treasurer: Brian Thwaites G3CVI *Vice Chairman Martyn Medcalf G1EFL*

LOTTERY FUNDED

Newsletter No 517 **Web Address: www.g0mwt.org.uk** **April 2009**

This Month's Meeting – Tuesday, 7th April. 7.30pm at the Marconi Club.

"An Introduction to Military Communications" By Michael O'Beirne, G8MOB

Michael is an author for the Vintage Wireless Magazine "Radio Bygones" and is an expert on Military Communications. He became interested in Chelmsford through his initial visit to Sandford Mill where he met Dr Geoff Bowles, Keeper of the Science & Industry Museum & Geoff Lovegrove, G7KLV, CARS Liaison Manager and green fingered mender of everything electronic. Michael was interested in the HR24 Receiver but soon noticed that behind the Marconi Hut, were displayed Marconi Radios of every description.

Michael says he will touch on the problems of inter-Service but concentrate on Army comms. This will be an introduction to the way in which military communications are run from both a theoretical and practical perspective. Topics will include: - The aim of military communications; An overview of army organisation: from platoon to divisions, and between main and support arms; Conflicting requirements, eg speed -v- security; Need-to-know basis and the all-informed basis; Communications in peace and on operations; Unit and formation nets and if time permits, radio relay techniques and encryption. He will also include: - Tactics; Introduction (briefly) to Electronic Warfare; Technical requirements of radios (electronic and physical); Examples of a few radios.

Questions and summing up. As this is an interesting subject, all local Clubs are invited to attend.

CARS now famous Raffle will have its usual table top of Raffle Prizes - only £1 per Ticket

Silent Ear – Kenneth Warren, SWL passed away on March 14th aged 76. See Page 6.
Funeral is on Wednesday, 1st April at Chelmsford Crematorium at 10.30am.

Dates for your Diary

Tues. 14th April	CARS VHF Net on 145.375MHz at 8.30pm, Local
Wed. 15th April	CARS Committee Meeting in Danbury Village Hall at 7.30pm – All Members welcome
Saturday, 25th April	Sandford Mill – International Marconi Day – Open to the Public 10am to 5pm.
Tues 5th May	CARS Meeting – Honeybees, Amateur Radio and Radar by Geoff Mills, G3EDM.
Sat & Sun, 9/10th May	Windmills on the Air – CARS at Stock Windmill – GB5SM. See page 5.

October was the start of the CARS Membership year – Subscription is the same as last year £12.00.
To become a Member of CARS, send a Cheque for £12 – adult Membership (16s and under are FREE) to:-
Mr Brian Thwaites, 118 Baddow Hall Crescent, Great Baddow, CHELMSFORD, CM2 7BU.
If you would like a receipt, please enclose a stamped addressed envelope with a 2nd class stamp.

Thanks to Geoff, G7KLV for sending the postal Newsletters – could it go by E-Mail?
Please inform Geoff, G7KLV by E-Mail of any changes to your call-sign, postal or E-Mail address, etc.
E-Mail him on g7klv@g0mwt.org.uk Thanks. Only by you sending Geoff your E-Mail address, can we ensure **WE** get it correct!

Club Nets: Tuesdays 8-30pm: (2nd) 145.375: (3rd) 28.375: (4th) 1.947: (5th) 145.375. All +/- QRM.
Net Controllers for April are Harry, G5HF & Colin, G0TRM. Thanks to Ron, M3CAM for doing it in March.

Last Months Meeting:-

"What has the RSGB done for me?" by RSGB President, Colin Thomas, G3PSM

On one of the wettest and windiest evenings for a long time, Colin travelled to Chelmsford to talk about the RSGB. It was thought that the appalling conditions kept a number of visitors away – many have travelled quite long distances to CARS meetings in the past, including the previous Aerial Meeting by Tony Gilbey, G4YTG.

The opportunity was taken by Martyn, G1EFL to ask Colin to present the last two Chelmsford Award Certificates to Colin, G0TRM & to Italian Station, IK3GER, Paolo Corsetti. Colin then presented the Constructors Competition Winner Shield to Ron Keefe, G4SIS for a beautifully hand crafted Capacitor 50 -250pF.

In starting his PowerPoint Presentation, Colin took a straw-pole which showed that most people in the room were Members of the RSGB and reinforced his statement that "I am preaching to the converted"!

What services do the RSGB provide?
Top of the list must be RadCom followed by the use of the QSL Bureau. The Bureau is now outsourced and hopefully previous problems are now overcome.

Help with Planning Applications, EMC & PLT problems PLT is heard as a warbling tone when listening using AM. SW listeners suffer worse. Colin said he hoped that new technology would overtake the problems.

TVI issues that are nominally attributed with Radio Amateur installations (but often due to wideband TV preamps) are at rather lower levels mainly due to the take-up of Satellite and Cable TV.

Problem users of Repeaters are identified by the 58 members of the Amateur Radio Observation Service and reported to Ofcom and dealt with by them, aided by the Police.

Intruder Watch – primary HF service that monitors the Bands for non Amateur intrusions, eg lower end of 40m. There used to be broadcast stations transmitting in the 7mhz Band. Intruders are identified to Ofcom who follow up and report to the Administration concerned.

Ofcom Liaison is an important aspect and it is apparent that the run down of Baldock is now realised as being a poor move and they are now recruiting. MOD and European Liaison is also an important aspect of RSGB work. Thanks to Murray, G6JYB for his work on this task.

Through CEPT the RSGB has arranged Reciprocal Licenses – British Amateurs can now operate in many countries without having to apply for a special License.

Between 12 and 15 years is needed before a new band can be introduced. 5MHz NoV holders (one present in the audience) were allocated to a frequency band used mainly by the MOD and is now used by Radio Amateurs for propagation research and security. The 100KHz at the top end of the 7MHz Band becomes operative at the end of March which most broadcasters have now left.

Colin compared the Membership fees favourably with that charged by radio magazines.

Responding to a question with regard to Bletchley Park, Colin said that they proposed to remove an old hut and replace it with a transportable building. This means that if in the future Bletchley Park wish to change their facilities around the RSGB could move their building accordingly. GB3RS should be on the air soon from Bletchley Park.

Another question wondered whether the RSGB were pushing the usefulness of Amateurs in the case of emergencies. Colin said that County Emergency Planning Officers are not all aware what Radio Amateurs can provide.

GB4FUN is the new RSGB Trailer – it is 27ft long fully equipped by many sources and can travel into London without requiring a Low Carbon Certificate.

Colin lamented that the status of the Radio Amateur has diminished since City & Guilds pulled out of administering the Licence Examinations.

After the refreshment break a CARS Member stated that a signal on 433.500MHz from 3 tower cranes in the Thames Estuary are causing radiation problems - Ofcom are aware and have verified that certain systems like these use non-compliant power levels but progress to resolve matters is slow. There was also a discussion about Ofcom data for numbers of Licences vs Licensees – "How many people here have more than one Licence?" was asked by Colin. Some present had 3 and even 4! This provoked several responses from the floor which indicated the Ofcom Database should account for this for existing licensees.

In conclusion Colin said that Ofcom do take the RSGB very seriously and this is rewarding.
The Chairman thanked Colin for coming and the audience showed their appreciation in the usual way.

John G8DET

Chelmsford Award – Essex Air Ambulance

It has been arranged to present a cheque of £500 to the Essex Air Ambulance on Friday, 24th April. Unfortunately, the Air Ambulance will not be available for trips around Chelmsford!
Watch the CARS Web Site for more details.

This is the culmination of 3 years work by Amateurs around the World and locally to subscribe to the Award thought up by Vice Chairman, Martyn G1EFL.

International Marconi Day – 25th April

To commemorate Marconi's Birthday, Radio Amateurs throughout the World with an association with Marconi will transmit, generally, using a Special Event Call-Sign.

CARS will have a VHF/UHF Station in the Caravan by The Barn by kind permission of Mark Sanderson, M0IEO and a HF SSB Station in the Marconi Hut. Operators, Loggers & Hosts are required – please see Brian, G3CVI at the April Meeting.

CARS Sports Radio (Contest) Group

Steve, G4ZUL will be organising a Pre-NFD CW Contest run-through at the same time as IMD. He will be operating from the Car Park by the Willow Trees which line the Chelmer Canal so should not interfere with IMD.

Go and have a look and see what they are up to – maybe you would like to join them in the future.

Gwyn, G4FKH has the new CARS Laptop running and he thinks it is fantastic, lovely screen, even his XYL is impressed!
It runs the Club's IC756 Pro-III with no problem, even when they are sitting side by side, there are no RF problems.

The Contest Group.

April Radio Sport (Contests)

RSGB 1st RoPoCo / CW
Sunday 05 April
Starts: 07:00 UTC
Finishes: 09:00 UTC
Band: 80 metres
Exchange: RST + Postcode received

Japan International DX / CW
11/12 April, 30 Hrs
Bands: 3.5, 7, 14, 21, 28MHz
Exchange: RST + CQ Zone
Full details from www.jidx.org

RSGB Club Championship (80metres)
Dates for April as follows:
CW 06 April. 20:00 – 21:30 Local
SSB 15 April. 20:00 – 21:30 Local
DATA 23 April. 20:00 – 21:30 Local
further information from www.rsgbhfcc.org

VHF Contests
First 70MHz contest
Sunday 05 April, 09:00 to 12:00 UTC
Sections: SF,O, (Special rules S2)

First 50MHz contest
Sunday 12 April, 09:00 to 12:00 UTC
Sections: SF.O, (Special rules M3)
further information from www.vhfcc.org

For any further information please email Steve G4ZUL
contests2009@g0mwt.org.uk

Playing about with WSPR

Some months ago an old work colleague, now living in VK6, suggested I try WSPR to broaden my experience of propagation. I did so and now I've been a member of the WSPR community for about 5 months. WSPR itself has been up and running for about 12 months and I'm sure it has surprised many in what can be achieved, me included. For those who have not tried WSPR or WSJT I hope the following will serve as an introduction.

WSPR (pronounced "whisper") stands for "Weak Signal Propagation Reporter." Essentially it is a program which implements transmitting and receiving using a computer soundcard and is usable with extremely weak signals. WSPR is an innovation by Joe Taylor K1JT in association with Princeton University and a development team. The software and a description of WSJT and WSPR can be found on the WSJT homepage: http://www.physics.princeton.edu/pulsar/K1JT/index.htm

An excellent "how to do it" guide has been produced by Julian Moss G4ILO entitled WSPR - Distant Whispers: Look here for setup info and frequencies etc.
http://www.g4ilo.com/wspr.html

WSPR is not primarily intended for two-way communication, although recent software releases will support a QSO mode, but may be considered as a QRP beacon transmitter with a receiving facility. Put simply, a transmission is made using

the WSPR software on agreed frequencies to listening WSPR stations that may hear the signal and automatically report back via the internet to the WSPR.net web site. Thus looking or joining the site permits you to look at the "spots" from those you have heard you and those you have heard. The net is synchronized to "international internet time" and transmitting and receiving periods for each station are about 1.5 minutes.

There are some choices as to transmit duty cycle and the software will introduce some randomization in an attempt to minimize TX collisions. The receiving software uses algorithms which effectively reduce the RX bandwidth to a few Hertz thus enabling the very weak reception capability.

Frequencies from UHF to VLF can be used, all you need is a stable SSB transceiver capable of USB on all bands and a standard audio soundcard interface, as used for SSTV or PSK31 etc.

Here on the East side of Danbury I mostly use a 12ft loaded whip antenna for 40 and 80 metres tuned against an earth rod. Typically, in recent times on 40 metres, VK spots have appeared from midday (GMT) onwards as the grey line traverses across East to West Australia. Later, two or three hours after at sunset at Danbury the path to the USA and S America opens up. Much depends on participating stations of course, but at times, it does seem that the propagation is more reliable than the operators!

If you haven't already looked at WSPR, why not try it and see what signal to noise reports you get, perhaps from different antennas and different bands. Reception only stations are useful and easy to setup, simply jack the soundcard audio input into the RX headphone socket and turn the volume low.

Peter, G3SUY (CARS Member)

Note: WSPR is now supported in the latest 2009 RSGB/IARU VHF bandplans. - Murray

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Low Power Space Contact

Foundation candidates often ask, How far can I get with 10 watts? The standard answer has been worldwide under good propagation conditions but a Foundation holder in Scotland has demonstrated 10W is enough for Space Communication as well.

Callum Graham MM3YCG recently had a contact with astronaut Mike Fincke who was onboard the International Space Station (ISS). It is believed that Callum is the first UK Foundation licence holder to have a QSO with an Astronaut onboard the Space Station. The UK Foundation licence limits users to just 10 watts output in the Amateur bands from 1.8 to 440 MHz. (1 watt at 135 kHz and 10 GHz).

Callum was using 10 watts from a Yaesu FT-847 feeding a Sharman Multicom X-50 co-linear at 30 feet. He got his licence in July 2007, thanks to the Mid Lanark Amateur Radio Society and since then he has had many contacts through the Amateur Radio Satellites. Callum has posted a video of his ISS contact on YouTube, see link below.

Mike Fincke holds the Amateur Radio callsign KE5AIT but for this contact he was using the ISS callsign of NA1SS. Mike was running the ISS Kenwood D-700 set up for cross band working on 437.8 and 145.8 MHz and putting out typically 5 watts output on 2 metres. The Kenwood doesn't run its full rated power because convection cooling doesn't work in a zero gravity environment.

Most of the astronauts on the ISS are licensed Radio Amateurs. If you've not heard the ISS before try listening on 145.800 MHz FM, you'll find rigs with the wider filters for 25 kHz channel spacing work best.

URL's - You can see a video of the MM3YCG – NA1SS contact on YouTube at: -

http://www.youtube.com/watch?v=aqUR3g5C9Jw

Mid Lanark Amateur Radio Society: http://www.qsl.net/gm3pxk/

N2YO Real Time Satellite Tracking: http://www.n2yo.com/

ISS Fan Club: http://www.issfanclub.com/

ISS Repeater Tips: http://www.southgatearc.org/news/february2008/iss_repeater_tips.htm

Amateur Radio on the International Space Station (ARISS): http://www.ariss.org/

AMSAT-UK website: http://www.uk.amsat.org/

AMSAT-UK Colloquium: http://www.uk.amsat.org/colloquium

Trevor, M5AKA

CARS - Windmills on the Air - 9/10th May

CARS will be operating from Stock Windmill using GB5SM from Mark Sanderson's (M0IEO) lovely caravan.

Patrick, M0XAP is organising this event – give your name to Brian at the April or May Meeting if you would Operate, Log or simply Host.

It was a great event last year with very good weather.

D-STAR News

The 70cm GB7ML D-STAR Digital Voice node is moving from Chertsey (Martin Lynch & Sons Ltd) in Surrey to central London at a new location near London Bridge. It should provide mobile coverage in South-East Essex and be workable from well sited base stations around the Chelmsford area.

The node uses the standard 9MHz D-STAR split, transmitting on 439.4625 MHz and receiving on 430.4625 MHz. GB7ML mobile coverage map: http://www.ukrepeater.net/repeaters/gb7ml.htm

Trevor, M5AKA

ICQ Podcast

This is an Amateur Radio podcast that has been steadily growing in popularity. The ICQ Podcast website, run by Colin Butler and Martin M1MRB, is at http://www.icqpodcast.com/

There are a few adverts but you do not have to read them! I was glad to see that they mention the CARS Training Courses in the *Links* section of the site.

The title of the latest podcast (Series 2 Episode 6) is "Volunteering" and it can be downloaded from http://tinyurl.com/ICQvolunteering

Trevor M5AKA

PLT – Another View

I am somewhat disenchanted by the publicity given by CARS to what I judge to be the more extreme views of some Members that appear to be based more on hearsay than experience. The reasoned and logically presented approach by Peter Chadwick, G3RZP, is by contrast admirable and hence more likely to prove effective in drawing attention to the problem and helping to result in a favourable outcome than the emotive views of some of the contributors to the discussion.

In my view the facts of the matter are:-

a) PLT exists as a mature and widely implemented technology,
b) It does cause interference to parts of the HF spectrum,
c) It should not affect radio amateurs.

There are obviously some problems for radio amateurs, firstly, there are some rogue PLT devices that do not comply with the industry agreement to inhibit carriers of the system in the amateur bands and so obviate interference to the amateur community: however, such instances are few and can be dealt with if approached sensitively. Secondly, all bets are off so far as 5MHz is concerned. We are graciously, in the strict sense of the word, allowed to use a few frequencies in this part of the HF spectrum courtesy of the MOD. It is not an amateur allocation and we have no jurisdiction over it.

In short, from practical experience, I operate a PLT system and so do some of my neighbours yet I experience no problems whatsoever in the HF amateur allocations (5MHz aside).

However, the foregoing could be construed as a most insular approach. Just because we as amateurs enjoy a privileged position does not mean that we should not support the wider good which is to rid the HF spectrum of unnecessary interference. The operative word here is 'unnecessary'. Whilst the technology behind PLT may have been an appropriate one initially it is certainly far from ideal, vis-à-vis its interference potential in the HF spectrum, furthermore, the communications problems it seeks to solve could now be solved by other less intrusive technologies centred upon enhanced WiFi/UWB for example.

Peter's proposal whilst laudable and eminently agreeable as presented still leaves open the option to employ PLT albeit in a more acceptable form: this will not satisfy everyone – as a farmer might put it "the only good rabbit is a dead one". However, realistically, perhaps this may be the best we can hope for at an international level.

I continue to make my plea, please cut-out the emotive stuff and references to it. WWW references should at least be reviewed prior to publication to ensure that the views expressed therein are consistent with amateur values.

Editor's comment: John does live within a few hundred metres of the Telephone Exchange with NO overhead wires feeding his house.
John's comments have been given to Colin Thomas, President of the RSGB.

John Greenwood, G3KRZ.

Slow Morse Transmissions

Andrew, G0IBN has kindly said he will (work & others things allowing, e.g. TV) operate Slow Morse transmissions on 3555-3560kHz +/-QRM at a nominal time of 2015 on each Wednesday and 2015 on every Sunday. Please look out for him. He will also be running Morse Classes in the Danbury Village Hall - Hawkins Room – Contact Clive Ward, G1EUC – see below.

Andrew, G0IBN.

Training - New Intermediate Course

A new Intermediate Course starts Thursday 30th April at Danbury Village Hall, bookings are now being taken, contact Clive below.

Candidates on our current Foundation Course sit their exam next week, good luck to them all. We look forward to hearing them on the air in the near future.

Members can help us by telling people about the Courses CARS run by putting up posters in public places. A poster for display can be downloaded from: -

http://www.g0mwt.org.uk/training/poster2.pdf

For details of all CARS Training Courses contact Clive Ward G1EUC

Tel: 01245-224577 Mob: 07860-418835
E-mail: training2008@g0mwt.org.uk

The CARS training page is at
http://www.g0mwt.org.uk/training/

For Sale – VHF/UHF Valves

CARS are very pleased to have been given the opportunity to sell the following: -

- Seven 4CX250BC Valves
  – Brand new by Amperex or Eimac.
- Four Bases plus another fitted with Ceramic Chimney.
- Four Ceramic Chimneys.
- Brass fitting strip.

Sensible offers, please to John, G8DET.

Car Collision Radar

CARS were pleased to hear that Murray, G6JYB had been involved in trying to reduce the effect of the latest car radar which threaten the Amateur 24GHz Primary Band at 24.0-24.05GHz.

At the beginning of 2009 it suddenly became clear at short notice that the EU, under pressure from the car industry, was considering a new form of automotive wideband Short Range Radar (SRR) radar (a collision avoidance aid). The RSGB and a few other Member Societies responded quickly and the inputs were considered by CEPT WGFM, which met at Cascais in February 2009.

John, G4EAT says “The overall pressure on new frequencies seems to come from EU safety directives and the automobile industry having no chance to meet the 2013 deadline (when they are to use 79GHz). As a result they have already requested low 20G frequencies and now want ADDITIONAL 24-29GHz spectrum for interim usage. As always the danger is that it could become entrenched and never move up to 79GHz.

The general microwave radio link industry and many post-telecoms operators are objecting but its a very powerful "safety" lobbying opponent.

Murrays says: - “I am following the next round of CEPT discussions in the various committees to see we we can push it up a notch out of the Primary section where all UK activity now is.
A further very quick RSGB input has just been made to CEPT group FM47 meeting on 26th March

Murray, G6JYB, Trevor, M5AKA and John, G4EAT

Silent Ear – Ken Warren, SWL

I first encountered Ken in 1956 during my apprentice training at Marconi (still Marconi Wireless Telegraph Company in those days) when I was rotated to the Research Labs, Room 100, at Great Baddow.

He was a BSc Physics graduate from London University working on the final Research aspects of Green Satin, a project for airborne Doppler navigation. I joined the same section as Ken when I completed my apprenticeship in 1957 and we worked together on low power X-Band continuous wave Doppler Radar used for artillery shell velocity measurement and eventually for Police traffic speed monitoring. He designed the J band head for speed measurement on Hovercraft and among other applications a superhet receiver for measurement of aircraft speeds when landing on Carriers.

He was an extremely confident and competent engineer, particularly in the microwave and waveguide area and later in complete system

design and development. He went onto mastermind projects such as Infantry Patrol Radar and “Scampi” (a battlefield surveillance project).

Another colleague reminds me that in the field of unusual velocity measurement he ran a project to monitor the size of smuts in coal burning power stations and was quite unfazed by the need to calibrate this equipment by dropping steel balls from the top of 300 ft high chimneys onto the radar sensor located at the base of the chimney.
He also contributed to the design of the Seawolf tracking and surveillance radars, particularly in the frequency synthesis aspects.

I transferred to the Radar Company from Marconi Research in 1982, so lost contact for about 10 years with his engineering career although we kept in personal contact and met regularly through the Chelmsford Engineering Society meetings.

He retired at age 63 and shortly after joined CARS but was never licensed. His health deteriorated in these later years with heart problems and a stroke, but he recovered well. He put most of us to shame with his regular exercise and thought nothing of walking into town and back from Great Baddow.

He leaves his Wife Joy and daughters Fiona and Linda as well as grandchildren Thomas and Bradley who I am sure will miss him greatly.

I know I shall feel the loss of such an old friend and colleague and miss the many long and interesting discussions on engineering topics and the dreaded computers. He was an unusual combination of a practical engineer with all the abilities and an extremely good theoretical capability.

The Funeral is at 10.30am on Wednesday, 1st April at Chelmsford Crematorium.

Ken Whittle. G7RFT

CARS extend condolences to his Widow Joy and Family.

And Finally…..

John G8DET edited this edition. Material by; Murray G6JYB, Trevor M5AKA, Steve G4ZUL, Gwyn, G4FKH; John, G3KRZ; John, G4EAT; Peter, G3SUY, Ken Whittle, G7RFT & Geoff, G7KLV.

Items for the next Newsletter should be sent to the editor@g0mwt.org.uk by Sunday, 26th April.